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ABSTRACT

Early proponents of charter schools argued that these human-scale organizations would help close the achievement gap. This paper examines survey data from principals of 1,010 charter schools nationwide during the 1999-2000 school year, along with 2,847 teachers in the same schools. Issues considered include how local activists and charter-school movement leaders define fairness in public education; how schools vary in basic resource levels, teacher quality, and support for low-achieving or disabled students; disparities linked to charter-school type; disparities linked to the ethnic makeup of schools; and gaps between charter and regular public schools. Sadly, charter schools suffer from inequities in basic resources, teacher quality, and student support that mirror disparate realities of regular public schools. The vast majority of charter schools fail to identify children with special learning needs, or prove not to be inviting places for these students. Policymakers should think carefully about how to distribute basic resources and qualified teachers more fairly. States should consider regulating charter schools against more careful quality standards. Two appendices contain relevant statistics and a discussion about which school attributes explain the variation seen in equity measures. (RT)

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April 2003

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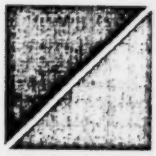

PACE WORKING PAPER SERIES 03-2

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Policy Analysis for California Education
University of California, Berkeley and Davis
Stanford University

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Policy Analysis for
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PACE

Charter Schools and Inequality

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Summary

Early proponents of charter schools, over a decade ago, argued that these human-scale organizations would help close the achievement gap. Liberated from downtown bureaucracy and voluminous state rules, charter schools would craft crisp educational missions, respond to diverse parents, and create tighter communities to strengthen motivation among students and teachers alike.

Underlying these hopeful claims is the assumption that charter schools can avoid the wide differences in financing, teacher quality, and student support that beset the nation's disparate public schools. Unless charter enthusiasts can escape deep-seated structural constraints, these independent schools may reproduce stratified layers of student performance, just like garden-variety public schools. On the other hand, if charter educators can deliver on their promises of spirited community and effectiveness, they may raise children's learning curves.

Only recently have national data become available to illuminate similarities and differences among charter schools. The National Center for Educational Statistics (NCES) surveyed principals from a (weighted) sample 1,010 charter schools during the 1999-2000 school year, along with 2,847 teachers in the same schools. This represents 86% of all charter schools that were operating in the prior year.[1] These survey data, released to research teams in fall, 2002, also now allow comparison between charter and regular public schools.

Universal or Localized Notions of Fairness?

Before delving into these differences, we examine how local activists and movement leaders have come to define fairness in public education, challenging older notions. Scholars assessing trends in education equity have typically employed *comparable indicators* – illuminating contrasts or similarities among schools – to understand which children gain access to schools of varying quality, then display uneven achievement.

Many charter advocates instead speak of *localized indicators* of what's fair, including parents' ability to choose a school that matches their interests and advances their community's identity. Charter adherents often emphasize more democratic forms of school management and direct accountability to parents as signs of fairness – more just ways of organizing the upbringing of their children.

We then turn to the new data reported by charter school educators, asking how their schools vary in basic resource levels, teacher quality, and supports for low-achieving or disabled students. We look at variability among different types of charter schools,

[1] Teachers and principals from 870 charter schools participated in the survey. All data were then weighted by NCES to represent the full population of 1,010 charter schools.

disparities among charters based on their ethnic composition, and how charters differ from regular public schools – along several measures of equity and fairness.

Differences and Inequities among Schools

We compare, for example, *start-up* charter schools, typically created by local parents or educators, with so-called *conversion* charters, including former public schools. Earlier ties to school districts and their resource streams, stronger among conversion charters, make for telling differences in teacher quality and salary levels, for example.

Our analysis next assesses differences between charter schools managed by *private companies* versus charter schools managed by *local educators*. In addition, we find vivid differences among schools based to the *ethnic composition* of their students, particularly resource shortfalls observed among charters that mainly serve black students.

We then ask how charter schools differ from *regular public schools* on average. This sets aside the wide variability across charters. But disparities in average teacher quality, staffing ratios, and salary levels prompt further questions about the present capacity of charter schools to serve students equitably.

Major findings are discussed within the following three areas –

DISPARITIES LINKED TO CHARTER SCHOOL TYPE

- Charter elementary schools are better staffed than high schools, gauged by the count of children enrolled per full-time teacher (staffing ratio). But the qualification levels of elementary charter school teachers are slightly lower, with just 45% holding a teaching credential, compared to 53% among teachers in charter high schools. Thirty-one percent (31%) of all elementary charter school students are African American and 15% are Latino, compared to charter high schools where 22% are black and 23% are Latino.

- Charter schools started by local parents or educators (*start-up charters*) mobilize fewer resources for classrooms than pre-existing public schools that have become charter schools (*conversion* charters). The average teacher working in a conversion charter, for example, earns $5,100 more annually than the average teacher in a start-up charter. Start-up schools employ two and one-half more part-time teachers per student than conversion charters.

- Charter schools serve significant numbers of children from low-income families – fully 43% are eligible for lunch subsidies according to school principals. But charters draw down few resources to provide *instructional supports* for low-achieving students. Only 4.5% of all charter students receive support funded through federal Title I dollars. If charter schools drew down Title I funding for low-achieving students at the same rate as regular public schools, matching demographic profiles, about one-fifth additional charter students would benefit from this instructional support.

- Less than 5% of the average charter school's students are identified as English learners, despite the fact that sizeable numbers of Latino children are being served.[2] With regard to students with learning disabilities, individualized learning plans (IEPs) required under special education rules are in place for 11% of all charter students.

- Charter schools run by *private companies* rely more heavily on less experienced and uncredentialed teachers, where 55% work with an emergency, provisional, or probationary certificate, compared to locally managed charters where 45% of all teachers are uncredentialed. Teachers in the latter group have two years more experience, on average, than teachers in privately managed charters.

- Charters managed by private organizations are less likely to offer an innovative or specialized curriculum, only about a third, compared to 48% of charters managed locally.

DISPARITIES LINKED TO THE ETHNIC MAKE-UP OF SCHOOLS

- Charter schools serve larger shares of African American and Latino students than their respective proportions found in regular public schools. But *ethnic segregation* is comparatively greater in charter schools. Three-fourths of all black charter students are enrolled in 273 schools. The share of students who are African American in these schools averages 80%, compared to 54% black representation among the comparable set of regular public schools.[3]

- Latino children attending charter schools are more integrated with students from other ethnic groups. Three-fourths of all Latino charter students attend 115 schools, in which 58% of average school enrollment is Latino. This compares to Latino representation of 51% in the corresponding set of regular public schools.

- Charter schools *serving predominately black children* – schools where more than half the enrollment is African American – rely more heavily on uncredentialed teachers. In these schools, 60% of the teachers are working with an emergency, provisional, or probationary certificate. This compares to teachers in predominately white charter schools, where 44% are uncredentialed.

- Predominately black charter schools are less likely to develop *individualized education plans* (IEPs), under special education rules, compared to predominately white schools ($p<.10$). This difference appears even though black charter schools enroll twice the percentage of children eligible for lunch subsidies, a proxy for family income which is correlated with the identification of children with learning disabilities in regular public schools.

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[2] English learners, typically identified in regular public schools, include groups other than Latino children. This example is used since charters overall have attracted high proportions of Latino families.

[3] The corresponding set of regular public schools included those which, in total, serve three-fourths of all black students nationwide. All schools were first ranked, starting with the school enrolling the most African American students. After identifying the schools enrolling three-fourths of all black students, the mean share of blacks students (as a proportion of total enrollment) was calculated.

GAPS BETWEEN CHARTER AND REGULAR PUBLIC SCHOOLS

- Charter schools face tighter *financing* overall than regular public schools, displaying scarce resources that directly support teachers and classrooms. For example, the staffing ratio shows the each charter teacher must serve over one-fifth more students, compared to the average teacher in regular public schools.

- Regular public schools are able to attract and retain a much larger proportion of *credentialed teachers.* Just under 9% of regular public school teachers are working without a credential, compared to 43% of charter school teachers. In addition, charter teachers have been in the classroom seven fewer years, on average, compared to regular public school teachers.[4]

- These resource disparities are felt directly by charter school principals: they earn 19% less than principals in regular public schools on average. Comparable salary data for teachers are not yet available.

A portion of these gaps may be explained by the more urban surroundings in which some charter schools are found. However, charters overall serve only slightly more children from low-income families than regular public schools. For instance, 43% of all charter students are eligible for free or reduced-price lunches, according to principals. This compares to 39% of all children attending regular public schools.

Overall, the magnitude of reported differences throughout this report did not change appreciably when we analyzed elementary charter schools separately from high schools.[5]

Are Charter Schools Reproducing Achievement Gaps?

In sum, charter schools suffer from inequities in basic resources, teacher quality, and student support that mirror disparate realities of regular public schools. Disadvantages faced by start-up charter schools are especially worrisome, given that 74% of all schools in the NCES sample are start-ups. Public-school conversion charters, comprising 16% of all charters, appear to be remain more tightly linked to resource flows stemming from their school districts. This provides the distinct advantage of hiring and retaining more experienced and better qualified teachers.

The vast majority of charter schools are failing to identify children with special learning needs, or charters are not proving to be inviting places for these students. Most schools are failing to work with their local districts to acquire categorical aid dollars, such as Title I or special education funding to serve low-performing students, monies to which they are entitled in most states.

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[4] The school is the primary unit of analysis for our study. The share of teachers without a credential equals 48% within the mean charter school, higher than the 43% calculated across all individual teachers.

[5] All mean differences appearing in the text are statistically significant at $p<.05$ unless otherwise noted. A portion of these findings will appear this summer in Bulkley, K., & Wohlstetter, P. (eds., in press). *Cutting loose: The impact of charter schools on educational practices, teachers, and students.* New York: Teachers College Press.

The attraction of charter schools for African American and Latino families may offer useful lessons for regular public schools. In addition, the self-determination displayed by predominately black or Latino charter schools may strengthen a spirit of community and coherent identity – new notions of what's fair in public education. At the same time, predominately black charter schools display lower resource levels, a scarcity of credentialed teachers, and little capacity to pull down categorical aid dollars for low-performing children.

The sharp disparities between regular public and charter schools, along with stratification among charters, raise the question of whether this robust movement is inadvertently reproducing achievement gaps. This study can not determine whether the types of resources measured – especially gauges of teacher quality and the limited availability of categorical aid – contribute strongly to student achievement. But if charters deliver fewer resources to the classroom, compared to regular public schools, or predominately black charters continue to rely on uncredentialed teachers, then no one should be surprised when charter evaluations show disappointing achievement results.[6]

What Should Policy Makers Do?

These findings suggest that state and federal policy makers – often eager to grow more charter schools – should think carefully about how to distribute basic resources and qualified teachers more fairly. Government could better target charter aid on those schools that serve low-achieving students, including those charters that are less able to hire and retain fully credentialed teachers. How these schools will meet new teacher quality mandates contained in the No Child Left Behind Act is unclear.

States might regulate charter schools against more careful quality standards. A complete teaching credential is an imperfect indicator of a teacher's classroom effectiveness. Yet it remains unclear how many start-up and privately managed charters, relying so heavily on uncredentialed teachers, can effectively raise children's learning curves, especially youngsters from low-income families.

PART 1. Recasting What's Fair in Public Education

America's affection for public education springs from the ideal that local schools can impart the shared knowledge and values that unify our disparate society. Public schools, when they work, affirm universal facets of human life: a shared language, a commitment to democratic participation, and skills that allow individuals and groups to succeed in the economy.

This faith has persisted ever since irreverent Americans rejected the old European order that ensured dominance by particular groups and caste-like boundaries that defined one's membership in a bounded social class. The modern state and its public schools came to be seen as the institutions that would reward each individual's effort and merit, eclipsing the
pre-modern assumption that ascribed characteristics should determine each child's future.

[6] Miron, G., & Nelson, C. (in press). Student academic achievement in charter schools: What we know and why we know so little. In Bulkley and Wohlstetter (eds.).

One intriguing aspect of the charter school movement is its non-modern commitment to particular ways of teaching children who are, with intent, segmented in particular communities, at times drawing public funds into private settings. This widening rejection of common schooling – or perhaps its impersonal, bureaucratic form – is energized by intriguing bedfellows, from Latino activists fed-up with unresponsive city schools, to affluent white parents who seek a pristine school behind their gated community.

Charter Schools and New Conceptions of Equity

This holds implications for how educators and political leaders think about fairness and the school's role in building a more equitable society. Many parents and educators believe that the present system is unfair – since it fails to advance their local curricular or cultural agenda, moral values, or local identity. This departs sharply from how we have historically conceived of equity, drawing on measures of school funding, teacher quality, or student achievement that allow us to compare across schools.

This report first illuminates this growing debate – prompted by robust growth in charter schools – around how we define fairness and equity in education. Then, we employ measures from old and new definitions of equity to see how charter schools vary remarkably amongst themselves. We also compare charter schools against regular public schools on basic indicators, such as staffing levels, teacher quality, who gains access, and instructional supports for low-achieving children.

Finally, we discuss the implications of our empirical findings, asking whether the state should exert political authority – under the new rules of decentralization – to address resource disparities observed among charter schools, as well as wide gaps between charter and regular public schools. Faithful expansion of charter schools without attention to equity may sharpen, rather than meliorate, persisting gaps in student achievement.

Discounting Comparable Forms of Equity?

What is defined as *fair* by many charter advocates, as we will hear below, is no longer attached to comparable benchmarks of student access or teacher quality, for example. Instead, charter advocates define as unfair the fact that so many schools are starkly ineffective in boosting the learning and socialization of youngsters – be it to follow the cultural tenets of their communities or society's broader values.

Advocates for decentralized education policies, including charter school proponents, are critical of the state's authority and the bureaucratic organization of urban schools. While defenders of the modern state view public agencies, including the school institution, as pro-equity in character, many charter advocates rightfully see public bureaucracy as failing at the task of fixing dysfunctional schools and closing the achievement gap.

In the eyes of many charter advocates, families should enjoy a wider, more colorful array of school options. As parents exercise choice, they can then match a charter school's agenda to their particular interests, whether defined as a shared language or shared way

of raising their children. Charter advocates believe that public rules and distant authority cannot ensure this match. Instead, public agencies should charter local groups to create schools that fit the parochial interests of local educators or parents.

What are the origins and forces that drive this shift toward localized conceptions of fairness?
It may stem from post-modern identity politics, including disaffection with centralized institutions that seem to advance homogenized conceptions of teaching and learning. A thirst for human-scale community and meaningful participation, among parents and local educators, seems unmistakable. The revived legitimacy of ethnic identity and local ties erode the authority of professionals and feed a yearning for stronger control over how our children are raised (Wells, Lopez, Scott, & Holme, 1999).

Alternatively, the move away from universals and comparable gauges of equity may be pre-modern in some ways. Parents with more wealth, time, or chutzpa seek out better schools, or display greater wherewithal in creating new schools. This, in turn, acts to reproduce their own cultural or moral values, not to mention their social-class position (Fuller, 2000). When public bureaucracy feels so unresponsive in the eyes of affluent elites *and* inner-city parents, the shiny ideals of common schooling begin to tarnish.

Charter advocates have become the new cultural relativists – uniting proponents on the political Right who typically press for conforming beliefs, and those on the Left who press for equity in many domains of life. Together they are pushing new definitions of what's fair and discounting older forms of comparable equity. Whether a school with a black-nationalist curriculum in Lansing, Michigan is more open, more resourceful, or boosts test scores more effectively than a school serving Mormon children outside Phoenix, Arizona is no longer a relevant question when it comes to establishing fairness. The two schools are just *different.*

This ascendance of institutional relativity is now viewed by many as being in the public interest, more fair than comparing schools along universal gauges of equity, from differences in school resources to whether children are learning more, relative to other schools.

Tandem Talk over Fairness

Grassroots charter school activists and national advocates do worry about fairness. We identified – after reviewing studies and media reports containing the voices of charter adherents – four features of these conversations. These dimensions challenge historical definition of fairness, as summarized in Table 1.

We cannot generalize to all advocates at national and local levels. Our aim in this section is simply to illustrate the localized conceptions of fairness that have arisen within the charter school movement and how they depart from earlier notions of equity.

Table 1. Conceptions of Fairness and Equity – Common Schooling versus Charter Schooling

Common School Model – modern means of advancing fairness	Charter School Model – non-modern means of advancing fairness
Equal access and affirmative policies for inclusion	Community cohesion, purposeful selection of certain families to reinforce local unity
Professional management, hierarchical division of labor	School-level democratic participation, communal division of labor locally
Integrating diverse children, school as melting pot	Legitimating separate groups, schools that reproduce local cultures, classes, norms
A uniform school institution, accountable directly to public authority	Diverse forms of school organizations accountable to neighborhood parents

Selective inclusion of children to advance community cohesion. The first novel conception of fairness reflects the value that selecting particular types of families into a charter school is a legitimate way of creating a tight community. This vividly contrasts the common-school ideal of bringing diverse children under one roof. Many charter activists have come to see this old ideal as hollow and unfilled, or simply less important than constructing cohesive collectives.

After spending several days inside the all-black El-Hajj Malik El-Shabazz Academy in Lansing, researcher Patty Yancey asked Mr. Hollingsworth, the "at-risk specialist," whether such charter schools in Michigan were re-segregating students along racial lines. He vehemently objected. The family feel of El-Shabazz bred trust between parents and teachers, and this sense of community was linked to being African-American. Mr. Hollingsworth had earlier written an opinion piece in the *Lansing State Journal*:

> Racial segregation means to be excluded, to bar or prevent someone from a right or privilege. Therefore, to conclude that the highly Black populated charter schools…were developed with the evils of racial segregation is highly inaccurate. These schools are not practicing exclusion, but simply offering choices. We are catering to our clientele. This is the school we never had, a school for the community. This is why many Blacks have flocked to these schools, because children who seem to have no place have now found a place (quoted in Yancey, 2000, p.92).

Similarly, parents at the Yoder Charter School in Kansas – over half of whom are Amish – sounded ecstatic about receiving public funds to pursue what many would consider private virtues. The school won a waiver to avoid having to cover sex education in their instructional program which explicitly advances "the values taught at home, including responsibility, compassion, honesty, and a strong work ethnic" (Finn, 2000, p.232).

Democratic school management and grassroots participation. Few Americans believe that unresponsive, bureaucratic management is fair – it violates the individualistic tenets of our political culture. By breaking from the downtown school bureaucracy and state rules, charter advocates hope to pursue a fairer, more invigorating form of participation.

This represents an ideological bridge from the nineteenth-century New England ideal of schools run by townships, a quaint model that Horace Mann's would eventually argue was unfair for poorer settlements. Still, some charter advocates are reinvigorating a decentralized variant. Take, for example, the words of Nina Lewin, founding parent at the Chelmsford (Massachusetts) Public Charter:

> We were involved... in everything from serving on the planning committee, to finding a company to help with the management of the school, to cleaning up the building and painting the walls. It's been an intense experience. It takes an extremely dedicated group (Finn, 2000, p.229).

After studying charter schools in 12 California school districts, Amy Wells and colleagues (1999) were struck by activists' desire to open-up "identity-building spaces," using the charter structure to express and operationalize their own conception of how their children should be raised and how teachers' work should be crafted for their own community. Rather than a school that springs from a culturally homogenous New England village, charter schools have become organizational devices for invigorating a pluralistic range of ethnic, linguistic, and religious communities.

Legitimating public funding for particular groups. The images of a coherent and supportive community were vividly portrayed by teachers and students alike at Amigos Charter Academy in Oakland, California. One former student from this small middle school told researchers Edward Wexler and Luis Huerta (2000, p.100):

> It was just really like a community setting... like we were learning at home . . . with a bunch of our friends. They had really nice teachers who were, you know, mostly Chicano and Chicana . . . We could relate to them. They know your culture, your background. [They] talk to your parents. . . and your parents trust them. It's like a family.

Current students reported feeling more comfortable because they could freely speak Spanish in class and on the playground.

Another intriguing example is the Valley Home School Charter, created by an enterprising school board that enticed over 600 parents from their church-based networks to enroll in this public option, generating millions of dollars in new revenue for this small district. Many of the parents, a range of Christian fundamentalists, were delighted to receive free curricular materials and send their youngsters to learning centers, dance classes, computer labs, even a home-school marching band.

But the superintendent of this small district candidly told us, this approach "is not for everyone... these parents prefer familial, church, and intergenerational educational experiences made possible through home schooling" (Huerta, 2000, p.187).

One parent said that "the main reason [for joining the charter school] was for religious reasons...different Christians take it from different viewpoints." Another parent told Huerta (2002, p.187), "I'm raising my kids the way I want to raise them, not the way government-run schools think I should. I believe it's my right to pass on the values that I believe."

Stimulating growth of alternative schools. The voices of charter advocates often celebrate the importance of having diverse forms of schools tightly linked to their

immediate communities. Chicano activist, Marcos Aguilar, helped to found the *Academia Semillas del Pueblo* (Seeds of the Town) in East Los Angeles. At the school's opening, Aguilar promised an "alternative, community-based and culturally sensitive" pedagogical approach. "We are not following something we bought and paid for two months ago with a grant. What we are developing is a living, breathing way of teaching as a community" (Cardenas, 2002, p.B1).

Reminiscent of earlier research within the effective-schools tradition (e.g., Rutter, 1979), charter founder Rosanne Wood of Tallahassee argued that "more choices allow schools to have a theme or focus instead of an all-purpose curriculum. We'll have more students with schools that fit" (Nathan, 1996, p.5).

This emphasis on a clear mission is often coupled with the claim that direct accountability to parents will advance fairness. For example, one founder of an ethnocentric charter told Wells et al. (1999, p.193). "Speaker after speaker said (to the school board) that maybe we needed to have our own schools. We need to decide our own curriculum. We can decide how our children are going to learn, what they are going to learn."

Fairness Talk of Charter School Wonks

Our earlier work inside charter schools revealed that many teachers and involved parents do not identify with the broader movement – they are too busy trying to stay afloat and improving their own school (Fuller, 2000). Nor do they necessarily compare their school to another on equity grounds; relative gauges of fairness are rarely invoked.

But many professional advocates, working from state associations and think tanks, tend to blend old and new conceptions of fairness. They voice the new discourse, emphasizing particular opportunities, crisp school missions and norms, and a participatory spirit. Yet at times they fight a rear-guard action – defending charters against claims that they are selective, unfairly aided by private donors, or no more effective than regular public schools. This pushes charter school wonks to engage the conventional logic of equity.

Rather than highlighting the particular character of many charter schools, Finn, Manno, and Vanourek (2000, p.164) argued that unfettered markets advance fairness: "Instead of a government-style enforcement of racial balance, a market-based alternative... would leave it to people's good judgment to set checks and balances on charter schools. The marketplace will usually do a decent job, but charter schools should also be vigilant."

While not invoking market dynamics, President Clinton's assistant secretary of education, Gerald Tirozzi (1997), expressed similar optimism before a congressional committee:

> An important principle [of charter schools] is equity. Sufficiently diverse and high-quality choices among charter schools, and genuine opportunities to take advantage of those choices, must be available to all students. Admission to charter schools must truly be open and accessible to all students . . . Legislators, charter authorities, and charter developers should take steps to ensure that such things as the absence of a free lunch program or a specialized curriculum... do not preclude certain students from attending.

Note that Finn and colleagues and the Clinton Administration all talked in the old language of equity, focusing largely on egregious forms of discrimination or barriers to access. Few charter advocates would disagree. Yet would they accept efforts aimed at attracting the diverse range of families that Tirozzi's comments imply? Or, would this violate the principle of selective inclusion in the name of community, legitimated by the new logic of what's fair.

Earlier Research on Equity and Effectiveness

Careful studies of charter schools remain scarce. But sound evidence is emerging on two key questions: What kinds of families are gaining access to charter schools? What are the effects of charter schools on children and teachers?

When it comes to assessing equity concerns, most scholars to date have tacitly worked from the earlier gauges of fairness. Take, for instance, the question of whether charters schools segregate children (or teaching staffs) along lines of class or ethnicity. Initial empirical work suggests that charter enrollments are similar to the ethnic composition of nearby public schools. About two-thirds of all charters enrolled a student body that was within 20% of their surrounding district's share of non-white students in the late 1990s. Close to 18% enrolled a higher share of students of color (RPP, 2000).

But charters do tend to isolate black or Latino students in some states: 69% of all charter students in Michigan were African American, largely situated in the Detroit area, while just 14% of the state's enrollment was black in the mid-1990s (Public Sector, 1999). Similar statewide patterns have been detailed in Arizona, Connecticut, and Pennsylvania (Cobb & Glass, 1999; Bulkley & Fisler, 2002; Horn & Miron, 1998; Miron & Nelson, 2000). Many charter schools have sprouted in low-income neighborhoods. One national assessment found that 39% of sampled charter students were eligible for subsidized lunches, compared to 37% in all public schools (RPP, 2000).

Concerns have been raised over the extent to which English learners (EL) are being served by charter schools, and whether support for these students is provided. Charter schools in Colorado and Florida serve low percentages of EL students relative to statewide enrollments. Similar worries are expressed over whether charter principals discourage children with disabilities from applying for entry. Legal action has been taken by parents against specific charter schools (Fiore et al., 2000).

Do charter schools invite certain kinds of families? The case studies reviewed above suggest they do – justified under the new notion of fairness that parents and educators should be able to choose schools with like-minded members who raise their children in similar ways.

Even when charter directors attempt to build a more diverse range of students, this effort may be constrained by a school's particular mission. Wells and colleagues (2000) detailed how a Los Angeles charter director pursued diversity and preserved magnet-school funding by targeting recruitment on Asian-American and middle-class students of color. "Charter school operators have more power than educators in regular public

schools to shape who becomes a part of their school… control over recruiting efforts, student academic requirements, and discipline practices (Wells et al., 1998, p.42)." [7]

Are charter schools more effective? New notions of fairness may gain credibility if charter schools can help to close the achievement gap. The question is whether charter educators can raise the learning curves of weaker students, especially given their early success in providing access to low-income families.

Studies to date have found that students attending charter schools do not consistently outperform those enrolled in regular public schools, at least on standard achievement measures. In Michigan, Horn and Miron (1998) assessed test scores, comparing students enrolled in charter and regular public schools. They found that charter students displayed weaker learning gains than students attending conventional schools.

No achievement advantage has been detected in average school-wide scores among charter students in California, compared to regular schools, after taking into account social-class, language, and other student characteristics (Brown, 2003). In Arizona, researchers tracked student-level scores over a three-year period, and charter students demonstrated slightly higher reading gains across the grade levels, while no significant difference could be detected in math performance (Solmon, Paark, & Garcia, 2001).

Encouraging findings have emerged in Texas, where low-income and "at risk" students attending charter schools outperformed similar students in regular public schools on the Texas Assessment of Academic Skills (Texas Education Agency, 1999). Yet for other students, charter attendees did less well than those in regular schools. This research team also found that newly opened charter schools were not as effective in raising achievement as were older ones. Additional details on recent achievement studies are reported by Miron and Horn in a forthcoming chapter (Bulkley & Wohlstetter, in press).

Scholars typically judge charter school performance based on traditional conceptions of effectiveness and equity. Looking back at Table 1, charter schools instead could be gauged along these dimensions of community cohesion, democratic management, implementing particular learning agendas, and levels of direct accountability to parents – new notions of what's fair and effective. Charter schools might also be effective if they move their local school district to become more responsive and innovative.[8]

This early research often compares charter schools with regular public schools. This point of comparison is important, and we detail new findings below within this genre. But we also want to learn about the *distribution* of resources, teacher quality, and family access *among* charter schools. Have charter schools achieved a greater degree of equity in their resource levels than regular public schools? Or, do charter schools, unequal in their capacity to mobilize essential resources for teachers and classrooms, produce the same achievement gaps that beset public education at large?

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[7] Another evaluation from California found that three-fourths of all charters required parents to work at the school, perhaps unintentionally excluding certain families (SRI, 1997).

[8] A portion of these new research directions, drawing on new conceptions of fairness and effectiveness, are explored in Peterson and Campbell (2001).

These are the questions to which we next turn.

PART 2. Charter Schools, Differences, and Inequality

Until recently we have been unable to study equity and fairness among charter schools nationwide. This is now possible thanks to the recent survey of charter principals and teachers, conducted by NCES and released in fall 2002. The latest *Schools and Staffing Survey* (SASS) included an unprecedented effort to reach all public charter schools that operated during the 1998-99 and 1999-2000 school years, equaling 1,010 known institutions (Gruber, Wiley, Broughman, Strizek, & Burian-Fitzgerald, 2002).

This unprecedented survey yielded school-level information, typically reported by the principal (86% response rate, n=870), and questionnaires from 79% of sampled charter school teachers (n=2,847). Data from the 870 participating charters, gathered during the 1999-2000 school year, were then weighted to provide national estimates pegged to the original universe of 1,010 charter schools. In the analysis that follows we report on this weighted sample.[2]

Analytic Plan – Equity among Charter Schools and Compared to Regular Schools

Our empirical study first examines how multiple indicators of equity – stemming from old and new conceptions of what's fair – varied across different types of charter schools. Second, we focus on how charter school enrollment tends to be segmented by students' race or ethnicity. African American children, in particular, often attend charters that are racially separated from other charter schools, and this is related to disparities in basic resources. Third, we report on differences between charter and regular public schools along the equity benchmarks that surfaced from the first two analyses.

Conventional equity indicators – school resources. First, we assessed how charters differ in their level of resources and material inputs. We looked at staffing levels by calculating the ratio of students per full and part-time teacher. We also studied the number of instructional computers available per student, the midpoint in teacher salaries among incumbent teachers within a school, the principal's salary, and we constructed a simple index of the relative generosity of health benefits available to staff. A list of all measures, details on constructed indices, and inter-item reliability statistics appear in Appendix 1.

Conventional equity indicators – student attributes and access. We also report on basic attributes of students to shed light on which families gain access to charter schools, including children's ethnic and linguistic backgrounds, eligibility for Title I and lunch subsidies, and the share of students for whom individualized education plans (IEPs) have been developed, as reported by school principals.

Conventional equity indicators – teacher qualities. We examined important characteristics of teachers, including qualification levels, age, and experience in the classroom. We calculated the percentage of teachers working without a credential in each school, be they employed with an emergency, probationary, or provisional certificate.

Localized indicators of fairness – specialized mission and autonomy. We examined how charter schools differ along the kinds of indicators associated with new conceptions of fairness.
For example, we report on the share of schools that report specialized or "alternative" school missions, classroom innovations aimed at strengthening teacher-student relationships, and the level of influence reported by the principal, including the principal's perceived autonomy from education agencies.

We describe variability in teachers' perceived influence and autonomy within their charter schools (aggregated to the school level). These facets of social organization capture the new claim that giving teachers and school principals more autonomy from the district or state structure will enhance school-level community and effectiveness (Table 1).

Localized indicators of fairness – coherent community, parent, and teacher participation. Finally, we operationalized direct indicators of each school's cohesive community, as gauged by teachers' reported levels of support from their colleagues and principal, and the extent to which staff expressed shared beliefs.

We constructed a simple index of ethnic diversity or homogeneity among students, the number of nonwhite groups making up at least 10% of the school's enrollment. Under conventional conceptions of equity a more integrated student body is desirable. In contrast, we heard above how some charter enthusiasts advocate for the inclusion of particular kinds of children to advance like-minded community.

Two indicators of parent participation were constructed, measured by the number of programs a school offers that reach out to parents. These efforts include parent resource advisers and training for parents on how to help their children with homework.

For each of these localized indicators of fairness, we examined mean levels across four types of school contexts: the school's *grade level* (elementary, secondary, or combined), charter school *origin* (start-up, converted public school, or converted private school), *community type* (central city, suburb, or rural), and whether the school is managed by a *private company.* This includes charters operated by a for-profit firm or non-profit network.[9]

[9] We tentatively explored the state policy regimes under which charter schools operate across the states. Some states, for example, require charters to employ only credentialed teachers; others provide state aid for charters. But when we found differences associated with state policies, they were difficult to interpret. For instance, are charters with more highly qualified teachers more likely to operate within states that share certain demographic characteristic which also are associated with more pro-charter state policies? Further analysis is required to disentangle discrete policy effects from these other state conditions.

Ethnic Separation and School Resources

We also examined whether teaching resources and other support are related to the ethnic composition of charter schools. This involved assessing the equity and fairness indicators after splitting schools along *ethnic lines*, those serving primarily African American, Latino, or white students.

Comparing Charter Schools with Regular Public Schools

Finally, for those equity indicators that revealed differences in basic resources, family access, teacher quality, or student support *among* charters, we compared *charter schools* against *regular public schools*. The NCES survey included a parallel sample of just over 84,000 regular public schools, including very similar surveys of their teachers and principals.

Descriptive versus Explanatory Analyses

We aimed to describe possible differences in these equity and fairness indicators, splitting charter schools into the different kinds of schools. The present analysis does not fully identify the factors that independently drive these disparities. Appendix 2 reports findings from an initial assessment of what school characteristics may exert an independent influence on the equity measures. But more work is required to understand explanatory accounts.

Few Differences between Charter Elementary and Charter High Schools

We begin the analysis by assessing whether charter elementary schools differ consistently from charter high schools. The short answer is, only along a few characteristics are significant differences observed. Charter elementary schools did report having richer teaching staffs: the ratio of students per teacher was significantly lower in elementary charter schools (18:1), compared to secondary charter schools (25:1, $p<.001$). Charter high schools enroll smaller proportions of African American students (22% of their total enrollment), compared to elementary schools (31%; $p<.001$). Yet charter high schools enroll a larger share of Latinos (23%; $p<.001$), compared to elementary schools (15%; $p<.001$).

A smaller share of charter teachers reported holding a full credential, just 45% within the average elementary school, compared to 53% in the average secondary charter school ($p<.05$). That is, the majority (55%) of elementary charter teachers were working with an emergency, probationary, or provisional certificate. Elementary charters also reported more specific programs to encourage parent participation than high school charters ($p<.001$). Beyond these notable differences, elementary and high schools looked similar along the two sets of equity indicators.

Conventional Equity Indicators –
Resources, Family Access, and Teacher Quality

Other dimensions of organizational context proved to better differentiate the extent to which charter schools advance fairness and equity. Turning to Table 2, we look at several conventional gauges of equity, first focusing on the levels of basic resources mustered by charter schools. The three dimensions of school context define the rows: school type, community type, public or private management. We then report weighted means for equity indicators within each school context.

Teaching resources. In the first column we report on the ratio of students per *full-time teacher*. No significant differences arose that were associated with school context. But reliance on *part-time teachers* did vary markedly across different types of charter schools. For example, 103 students were enrolled per part-time teacher within start-up charters on average, compared to a ratio of 249:1 in public schools that had become charter schools (conversions). That is, start-up charters relied much more on part-time teaching staff. This may allow for a more differentiated curriculum if more specialized teachers are being employed. On the other hand, what are the implications for building a tighter community of fully committed staff?

We see in column 3 that the index of benefits available to teachers is significantly lower in private schools that have converted to charter status. An index value of 2.1 simply means that, on average, private-conversion charters offered just over two of three possible benefits: health coverage, dental, or life-insurance (Appendix 1).

The final two columns in Table 2 focus on salary levels, an obvious dimension of school resources. Public-school conversions offer significantly higher teacher salaries ($37,103 is the median salary), compared to start-ups ($32,001) or private-conversion charters ($29,985; $p<.001$). These differences may be linked to teacher experience levels, as detailed below. Principal salaries are considerably higher in public-conversion charters, as well ($62,031), compared to start-ups ($54,530, $p<.001$). And suburban charters pay principals more, compared to charters in central cities or rural areas ($p<.001$).

Student access and ethnic composition. Next we focus on traditional indicators of who enrolls in charter schools across differing school contexts? Charters are clearly serving significant numbers of African-American and Latino students, as shown in Table 3. Charters that converted from private school status serve the highest proportion of black children, 33% of total enrollment, compared to 29% among start-up charters and just 17% among public-conversion charters ($p<.001$). The latter tend to serve a higher share of Latino students, 22% of total enrollment, compared to private-conversion (16%) and start-up charters (17%).

Table 2. Conventional equity indicators – variation in school resources among charter schools
(*n*=1,010 weighted schools; weighted means and significant differences reported)

	Students per: full-time teacher	part-time teacher	Health & related benefits (index)	Teacher salaries, mean midpoint ($)	Principal salary($)
Charter school type		PPP	PPP	PPP	PPP
Start-up	20	103	2.5	32,001	54,530
Conversion-public	22	249	2.5	37,103	62,031
Conversion-private	16	87	2.1	29,985	46,938
Community type		PPP	PPP		PPP
Central city	20	116	2.5	32,154	55,980
Suburban	21	173	2.5	32,160	58,397
Rural	18	57	2.3	30,487	44,692
Public/private management			P		
Schools under district or state	20	122	2.4	31,907	55,770
Schools managed by private firm	21	133	2.6	31,990	53,459

Significance of mean differences, based on ANOVA or chi-square, appears above the variable: P $p<05$, PP $p<.01$, PPP $p<.001$.
Standard deviations and *f*-values available.

Table 3. Conventional equity indicators – variation in student attributes and access among charter schools
(*n*=1,010 weighted schools; weighted means and significant differences reported)

	Student Composition: African American (%)	Latino (%)	Students eligible for reduced price lunch (%)	Title I students receiving services (%)	English Learners identified (%)
Charter school type	PPP			P	PPP
Start-up	29	17	42	5.1	4.0
Conversion-public	17	22	48	2.8	10.1
Conversion-private	33	16	42	2.3	2.2
Community type	PPP	PPP	PPP		P
Central city	39	22	50	5.2	6.2
Suburban	17	13	31	3.9	3.6
Rural	8	12	44	2.9	3.2
Public/private management	PPP	P	PP	P	
Schools under district or state	25	16	41	3.8	4.6
Schools managed by private firm	32	20	47	5.9	5.6

Significance of mean differences, based on ANOVA or chi-square, appears above the variable: P $p<05$, PP $p<.01$, PPP $p<.001$.
Standard deviations and f-values available.

Not surprisingly, central-city charter schools serve higher proportions of black and Latino students, compared to suburban and rural charters (both mean differences are significant at $p<.001$). Asian-American students were somewhat more concentrated in public-conversion charters, about 4% of total enrollment, compared to start-ups, 1.8% ($p<.001$; not shown).

Substantial shares of charter students are eligible for lunch subsidies, as reported by principals. Half of all urban charter students are eligible, falling to 31% among suburban charter schools ($p<.001$). We also see larger proportions of children from low-income families enrolled in privately managed schools.[10] Among regular public schools, 39% of all students are eligible for lunch subsidies, according to the 1999-2000 Schools and Staffing Study, conducted by NCES.

Drawing funds for instructional support. But very small proportions of students actually benefit from Title I compensatory education services. Even in central-city schools, principals estimated that just 5.2% of their students were receiving Title I support.

Nor are charter schools identifying many English learners, just 6.2% of total enrollments in central-city charters. Public-conversions report identifying more English learners, 10.1% of total enrollment, relative to start-ups (4.0%; $p<.001$).[11]

Qualities of teachers. Next we report on conventional equity indicators pertaining to how teachers, with varying qualification levels and demographic characteristics, are distributed across charter schools. This indicator might be linked to localized conceptions of fairness as well. For example, a higher percentage of teachers that share ethnic membership with their students could be an indicator of greater community cohesion. With this caveat in mind, Table 4 reports on the ethnic composition of teaching staffs.

Just over 18% of all charter teachers within central cities are African-American and about 9% are Latino. This compares to almost 7% black and 6% Latino in suburban charters ($p<.001$ for blacks when including rural schools, $p<.05$ for Latinos). Schools managed by private firms employ a higher share of Latino teachers (11%), compared to locally managed charters (6%; $p<.001$). About 2% of all charter teachers are Asian American.

Large numbers of charter teachers are working without a complete credential, comprising 51% of a school's teaching staff in start-ups on average, 28% in public-conversions, and 60% in private-conversion charters ($p<.001$). Uncredentialed teachers are more concentrated in central-city charters, 56%, compared to suburban charters, where 39% are uncredentialed ($p<.001$). Private management firms employ significantly higher shares of uncredentialed teachers (55%), compared to locally managed schools (45%; $p<.001$). Table 4 here

[10] This begs for further analysis of whether education management organizations are drawn to states with higher per pupil spending, including better access to categorical aid that may benefit low-achieving students.

[11] Principals were asked to report on the number of students that were "English learners." This does not necessarily mean that federal or state guidelines for legal identification were followed.

The final column of Table 4 also shows that private companies employ teachers with two years less experience in the classroom, on average ($p<.001$). Future work should examine whether privately managed charters -- representing 31% of all charters -- intentionally hire low-cost teachers, or whether their stronger presence in central cities makes it more difficult to find credentialed teachers.

Localized Indicators of Fairness –
Mission, Tight Community, and Participation

Next we report on indicators that stem from the new discourse around fairness. The first column of Table 5 reports on the percentage of schools reporting that they operated with a "special program focus" or self-identified as an "alternative school". About 44% of all start-up charters designated their school in this way. Privately managed schools were less likely to define themselves in this way, 35%, compared to publicly managed charters, 48% ($p<.001$). This suggests that the rise of private management may moderate the innovative impulse celebrated by early charter advocates.

Principals also reported on classroom innovations that aimed to strengthen social relations, such as, having students stay with their teacher for more than a year, relying on block scheduling, or forming children into smaller cohorts or "houses." On average, charter schools reported using an average 2.8 of six such organizational reforms (Appendix 1).

To gauge levels of perceived autonomy, an identical index was constructed for the perceived influence reported by principals and teachers in each of six domains, as well as how principals saw the state's influence in the same domains. For example, principals reported stronger influence within private-conversion schools (4.7 on the 6-point scale), compared to 4.5 in start-up and public-conversion schools on average ($p<.05$). But no other contextual factors were related to the principal's reported influence.

Principals viewed the state's influence as modest, compared to their own influence. The lowest level of state influence was reported by principals in start-up charters (2.6 on the 6-point scale), compared to principals in public-conversion charters (2.9; $p<.01$).

Teachers reported a modest level of influence within the same domains, with higher levels reported by those working in rural charters ($p<.01$), and less influence reported by teachers working in privately-managed schools ($p<.01$). While principals reported higher levels of influence, largely independent of their context, teachers do not feel the same level of autonomy or efficacy over these six areas of school policy and practice.

Finally, we examined indicators of cohesion as reported by charter educators. For example, teachers were asked a series of questions regarding the extent to which norms and beliefs about learning objectives were shared, and the level of support by the principal around these dominant expectations. An index of "cohesive school beliefs and principal support" was

Table 5. Localized indicators of fairness – variation in curricular mission and autonomy among charter schools
(*n*=1,010 weighted schools; weighted means and significant differences reported)[1]

	Alternative schools w/specialized mission[2]	Classroom innovations: relationships (index)	Principal's reported influence (index)	Principal's report of the state's influence (index)	Teacher's reported influence (index)
Charter school type			P	PP	
Start-up	44	2.8	4.5	2.6	3.0
Conversion-public	42	2.9	4.5	2.9	3.2
Conversion-private	50	3.1	4.7	2.7	2.9
Community type					PP
Central city	46	2.9	4.6	2.7	3.0
Suburban	39	2.8	4.5	2.6	3.0
Rural	46	2.8	4.4	2.7	3.3
Public/private management	PPP				PP
Schools under district or state	48	2.9	4.5	2.7	3.1
Schools managed by private firm	35	2.8	4.5	2.6	2.9

1. Weighted principal data, rather than the school survey data, yields different weighted *n* for selected variables.
2. Percentage of all schools self-reporting as having a "special program focus" or "alternative" instructional mission is reported. This excludes a small number of special education and vocational schools.

Significance of mean differences, based on ANOVA or chi-square, appears above the variable: P $p<05$, PP $p<.01$, PPP $p<.001$.
Standard deviations and f-values available.

built from five items that emerged from factor analysis. For each item, a four-point scale indicated the teacher's agreement or disagreement with the statement.

Turning to Table 6, we see that teachers' degree of agreement that fellow teachers shared core beliefs, and that these commitments were reinforced by their principal, were quite high (averaging 3.1 on this 4-point scale). School contexts were not significantly related to levels of perceived cohesion. This suggests that the charter organization itself advances a strong normative consensus, somewhat insulated from the surrounding environment.

The school's immediate community obviously affects the mix of students enrolled. The student heterogeneity index did vary systematically by school context. For example, 1.2 nonwhite groups with at least 10% of school enrollment were observed in central-city charters, on average, compared to 0.5 nonwhite groups in rural charters on average ($p<.001$). Privately managed schools were slightly more diverse in their enrollments ($p<.05$).

We constructed two indices of parent participation, as described above. The final column in Table 6 reports on the second index that counts the presence of structured programs and activities for parents, from drop-in centers on site to organized ways for parents to help their children with homework. The average school offered about four of the possible eight programs for parents. Public-conversion schools had created more such programs, on average, as did central-city schools (both significant at $p<.001$), compared to start-ups and suburban charters, respectively.

Disparities Tied to Ethnic Composition

We also split charter schools between those that serve predominately black, Latino, or white students. Resource shortfalls are most apparent in charters serving higher proportions of African American students (Table 7). This includes the 229 (weighted) schools where at least half of all enrolled students are black, compared to 671 (weighted) schools where half the enrollment is non-Latino white.[13] Predominately black charter schools appear to have more full-time teachers per student than charters serving mainly white students, although this mean difference fails to reach statistical significance.

Teacher quality differs markedly among these three sets of charter schools. Teachers at predominately black charters are younger and less experienced, and fewer hold a teaching credential, compared to teachers working at predominately white schools. Just under 60% of teachers at the average black charter school are working without a credential, compared to just under 44% at white schools ($p<.001$). This disparity is less at Latino charters.

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[13] Among these schools serving predominately black students, the share that was black equaled 86%. Within the 110 (weighted) schools where at least half the enrollment was Latino, the mean share Latino equaled 77%.

Table 6. Localized indicators of fairness – variation in school cohesion and parent participation among charter schools
(n=1,010 weighted schools; weighted means and significant differences reported)[1]

	Cohesive school beliefs and principal support (index)	Student heterogeneity (index)	Home schooled students (%)	Parent participation programs (index)[2]
Charter school type			PPP	PPP
Start-up	3.1	0.9	3.3	4.2
Conversion-public	3.1	0.9	7.1	4.7
Conversion-private	3.2	0.9	0.1	4.6
Community type		PPP	PPP	PPP
Central city	3.1	1.2	0.9	4.5
Suburban	3.1	0.8	6.4	4.4
Rural	3.3	0.5	7.1	3.8
Public/private management		P	PPP	
Schools under district or state	3.1	0.9	6.6	4.3
Schools managed by private firm	3.2	1.0	6.1	4.4

1. Weighted teacher data, rather than the school-level data, yield different weighted n for selected variables.
2. One of two parent participation indices detailed in the Appendix. This index pertains to structured programs that invite parent participation or training at the school, as well as structured home-based activities for parent and child.

Significance of mean differences, based on ANOVA or chi-square, appears above the variable: P p<05, PP p<.01, PPP p<.001.
Standard deviations and f-values are available.

Teachers reported having less influence and autonomy at predominately black charter schools, compared to Latino and white charters. Charters mainly serving Latino students paid the median teacher slightly more, compared to both black and white charter schools.[14]

Table 7.
Equity Indicators among Charter Schools Serving Predominately Black, Latino, and White Students

Equity indicator	Majority of enrolled students – African American	Latino	White	Statistical significance
Enrollment count	248	349	255	PP
Students per full-time teacher	17.6	23.0	20.5	
Teacher attributes				
Age	36.1	37.4	38.1	PP
Years of classroom teaching	5.3	5.9	6.4	R
Percentage uncredentialed	59.8	51.9	43.5	PPP
Teachers' reported influence [four-point scale]	2.7	3.0	3.1	PPP
Percentage students eligible for lunch subsidy	64.8	67.3	31.7	PPP
Students with special education IEPs	10.6	8.7	12.0	R
Salary levels (dollars)				
Principal	56,832	58,535	54,181	P
Median teacher	32,707	34,176	31,356	P

Weighted school subsamples when split by ethnic composition, n=229 predominately black schools, n=110 Latino schools, and n=671 non-Latino white schools. Total weighted n=1,010 schools.

Black and Latino charter schools, not unexpectedly, serve larger shares of children from low-income families, as indicated by the percentages eligible for free or reduced-price lunches. Yet few children have been the identified with a learning disability and have completed an individualized learning plan (IEP). Predominately white schools actually develop IEPs for a larger share of their students, on average, compared to black and Latino charters.

[14] We analyzed the possibility that these between-school differences are due to differing mixes of elementary and secondary charter schools. But this does not appear to make a significant difference. Predominately black charters are more likely to be elementary schools (70% of total), compared to white charters (55% of total).
A small number of predominately Latino, elementary charters tend to pay their teachers significantly more, compared to the other two groups. No difference in salary levels was observed for charter high schools.

How Do Charters Differ from Regular Public Schools?

Finally, we compared charter and regular public schools along the same measures (Table 8). The NCES sample of regular schools is quite large, equaling just under 84,000 schools with complete data. All mean differences reported in Table 8 – contrasting average levels for charters versus regular public schools – are statistically significant. This is due to real differences and the fact that sample sizes are large.

Charter schools serve larger shares of African American and Latino students, compared to regular public schools. However, charters serve only slightly more children who qualify for free or reduced-price lunches. On this measure charter student composition, relative to regular public schools, does not look dramatically different.

Black and Latino children are concentrated in particular charter schools. When we focus on the one quarter of charter schools where enrollment is at least half African American, the average representation of black students equals 89% of total school enrollment.

In general, charter schools display weaker resources allocated to teachers and classrooms than regular public schools. Staffing ratios are richer in regular schools, with 16.8 children enrolled for every one full-time teacher, compared to 20 students per teacher in charters.[15]

Table 8. Equity Indicators between Charter Schools and Regular Public Schools [means]

Equity indicator	All charter schools	All regular public schools
Percentage students,		
Black	27.2	15.5
Latino	17.5	12.3
Eligible for lunch subsidies	43.1	39.3
Students per full-time teacher	20.1	16.8
Teacher attributes		
Age	37.4	42.3
Years of classroom teaching	6.5	14.1
Percentage with credential	52.1	91.3
Students with special education, IEPs	11.4	12.8
Principal salary level (dollars)	53,920	66,645

Reported mean differences are statistically significant at $p<.05$ or better, due in part to large sample sizes. At the school level, samples include n=1,010 weighted charter and n=83,725 weighted regular public schools.

Charters employ younger, less experienced teachers. Over 91% of all public school teachers held a regular credential, compared to just 57% of all charter teachers. And salary levels are significantly lower in charters for both principals and teachers.

[15] This gap suggests that class sizes are smaller in regular public schools on average, compared to charter schools. But class sizes were not directly observed.

PART 3. Implications – All Charters Schools are Not Created Equal

These findings reveal wide variability among charter schools in their commitment or capacity to advance fairness and equity. The organizational history of a charter school – especially if it started from scratch or operated earlier as a regular public school – makes a sizable difference in the resources it now mobilizes, the quality of its teachers, salary levels, and its propensity to serve children from low-income families.

Public-conversion charters are better resourced but not always more equitable. They are more vigilant in identifying English learners, yet overall, serve a lower share of African American students. Public-conversion charters also display more numerous efforts to involve parents, compared to start-ups.

The resourceful nature of public-conversion charters may stem from stronger funding streams or an *a priori* spirit of public schooling. Perhaps public-conversion charters display a stronger survival rate, compared to poorly resourced start-ups that may suffer from higher mortality. Survival of the fittest may benefit conversion charters that do not sever ties with their home district.

Attending to Low-Performing Students

One important finding is that charter schools rarely draw Title I funds to aid eligible children – even though 43% are reportedly eligible for subsidized lunches. Even charters in central cities report that just 5% received Title I supported services. The average public-conversion charter identified just 10% of their students as English learners.

It could be that charters are disproportionately serving middle-class Latino families where Spanish is no longer their home language. More likely, charter educators are not carefully assessing children's language proficiency, nor seeking categorical funding to address the needs of low-achieving or learning disabled students. More research inside schools could illuminate why this inaction is so widespread.

The disparate quality of charter school teachers is another pivotal issue to explore further. Credentials are not the only valid gauge of teacher quality. But these gaps in the share of teachers within a school that have significant experience and a regular credential may help to explain modest levels of student achievement (Miron & Nelson, in press). Fully 51% of all charter teachers in start-ups are not credentialed. This share drops to 28% among public-conversion charters, and rises to 60% among private school conversions.

Charter schools managed by private companies rely more heavily on uncredentialed teachers (55% of their staff on average), compared to locally managed schools (where 45% are uncredentialed). Privately managed charters do serve higher shares of Latino students and children from poor families, offer somewhat stronger benefit packages, pay principals slightly less, are less likely to have specialized educational missions, and employ teachers who report lower levels of influence within their schools.

Comparatively weak levels of teacher resources may stem from the fact that privately managed schools are more frequently found in low-income communities, compared to the location of locally managed schools. Why privately managed schools report less commitment to alternative programs, employ teaches who feel less influence, and rely on less experienced teachers are important questions for future research. The resource flows that conversions experience may outweigh the claimed efficiencies pursued by privately managed charters. On the other hand, if the latter can boost student performance levels at lower costs, then lessons about cost-effectiveness may emerge.

Concern over inequities among charter schools is driven home by the fact that teacher quality appears to be lowest among charters serving predominately black students. One might raise the question of whether public funds should be used to even further isolate black children – the crux of the debate over what's fair in a radically decentralized policy world.

Yet simply on the grounds that many charters are isolating children in schools that have high proportions of uncredentialed teachers, then fail to draw down categorical aid available for these children, suggests that policy makers should take note and remedy this stark inequality.

Latino students are attending more integrated charter schools. This may offer lessons for multi-ethnic communities interested in creating charter schools or making existing schools more inclusive.

Why Are Charters Poor Relative to Regular Public Schools?

One mystery to emerge from this study is why charter schools acquire or allocate fewer resources to teachers and classrooms, compared to regular public schools. Teaching staffs are smaller relative to enrollment (staffing ratio). Teachers are younger, less experienced, and more frequently work without a credential. Salaries for charter principals are considerably lower, compared to what principals earn at regular public schools.

We know that many charter schools struggle to fund facilities and often face other operating costs that school districts typically cover, from energy bills to liability insurance. These costs appear to be eating into recurrent budgets, including funds available to pay teachers. Policy makers should consider whether to expand charter schools or ensure that these fledgling institutions receive basic financing that is comparable to regular public schools. Otherwise, we may never implement a fair test of this important experiment in public education.

Who Holds Authority to Equalize Charter School Opportunities?

We are left with a broad, nagging question: Do public authorities possess the political will or legitimacy to address these disparities observed among charter schools, and between charter and regular public schools?

The charter movement is founded in part on the assumption that excessive state authority and the bureaucratic organization of schooling must be surrounded and confined. In many

quarters – from state legislatures to local school boards – there is a view that charter schools asked for autonomy, so let's allow them to sink or swim on their own accord.

Two problems arise, however, if public authorities choose to ignore questions of fairness and equity among charter schools. First, charters may be reproducing structured forms of inequality based on unequal levels of resources and insufficient attention to low-performing and non-English speaking students. We have detailed how start-up charters in particular display weaker resources, less qualified and lower paid teachers, and even pay less attention to engaging parents. Start-ups comprise the bulk of all charter schools, three-fourths of all schools nationwide.

Privately managed charters, to their credit, serve higher shares of low-income communities. But similar to start-ups, they are serving central-city neighborhoods with fewer resources, compared to suburban charters. So, unless the state steps in – or charter associations seriously raise equity concerns – the movement will reproduce the very inequalities that many charter advocates claim to be erasing.

Second, charter advocates have shifted the modern discourse around equity and fairness down to very local levels. Rhetoric around market options and shared community are replacing old conceptions of equal access, equal school resources, and comparable gauges of teacher quality. This conceptual shift is shaking how we think about fairness in radically decentralized pockets of the education sector. The debate is important and may come to alter how we define what's fair across public education.

The rub is that government and local school boards may be reluctant to engage the disparities revealed in this report. Charter schools are to be autonomous. Public agencies are part of the problem, not part of the solution when it comes to liberating alternative schools. So the advocates argue. The worry, however, is that charter proponents have diminished the state's legitimacy to get involved in educational markets at the very moment that charter schools may be reproducing the same inequalities that beset regular public schools.

Some charter advocates have recognized that they occasionally need a strong and engaged state when it comes to overall school finance issues and regulatory standards for charter schools. But whether federal and state policy makers would be welcome efforts to equalize basic resources available to charters remains to be seen.

Future Work on Fairness

The research community has been slow to explore how charter schools may be advancing fairness in the movement's own terms, offering organizational alternatives, tighter school communities, and participatory social rules for teachers and parents alike. We found that charters vary less along these new conceptions of fairness, under differing school contexts, compared to sharp inequities when it comes to material resources, teacher quality, and instructional supports for low-achieving children. Future research could build from both logics when it comes to assessing fairness and equity – both among charters and when compared to regular public schools.

Focused work on start-up charter schools might explore whether they are advancing teacher well-being and student achievement with fewer resources, compared to conversion charters. The ability of the latter to hire more experienced teachers and pay them more does not necessarily lead to higher cost effectiveness, however.

In fact, many charter advocates argue that it's a different spirit and stronger school communities, not material inputs, that power their success. Let's test this claim empirically, looking across different kinds of charter schools. The life cycles and mortality rates of start-ups and conversions also deserve more research. It may be that conversion charters are more robust, compared to start-ups, simply because the strong survive.

Finally, we know almost nothing about how state policies aid, subvert, or simply neglect the health of charter schools. Certain state policies may be moderating the between-school disparities that we have illuminated. Or certain state policies may exacerbate how charters reproduce unequal outcomes for children and teachers.

All this leads back to a dilemma facing charter advocates: their minimalist instincts, when it comes to state activism, may reinforce the resource gaps that appear to be dragging down start-ups and privately managed charter schools. Inaction by the state may inadvertently advantage public-conversion charters – those that disproportionately serve suburban families. And if policy makers elect to ignore such disparities, they will again forfeit political authority and perhaps under cut the charter movement's legitimacy over time.

Appendix 1. School resources, student and teacher attributes, equity measures, and statistical properties (n= 1,010 weighted charter schools)

Concepts and school contexts	Measures	National means [weighted] and *sd*
I. Basic school attributes		
	Student enrollment (median=169)	264 (297)
	Number of teachers (median=12)	17.3 (17.6)
II. Fairness – traditional indicators (Tables 2, 3, and 4)		
School resources		
Teacher resources	Students per full-time teacher	20 (22)
	Students per part-time teacher	125 (184)
	Students per classroom computer	7.1 (8.2)
Teacher/principal compensation	Benefits index: additive of availability of general medical, dental, and life insurance	2.5 (0.8)
	Teacher salaries: mid-point between lowest and highest paid teacher currently employed	31,939 (6,672)
	Current principal's salary	55,073 (18,824)
Student attributes and access		
Ethnic composition	Percentage enrolled: Asian American (2.2%), African American (27.1%), or Latino (17.5%)	47
Access by diverse children	Percentage enrolled, receiving Title I services (median=0)	4.5
	Percentage enrolled, eligible for lunch subsidies	43
	Percentage enrolled, identified English Learners (median=0)	4.9
	Percentage enrolled with IEPs	11
Teacher qualities		
Basic attributes	Age in years	37.6 (7.9)

	Percentage school's teachers, Asian or African American, Latino	21
Qualifications and experience	Percentage working under an emergency, provisional, temporary, or probationary credential	43
	Years of teaching experience	6.1 (5.6)
III. Fairness – localized indicators (Tables 5 and 6)		
Specialized mission	Percentage of principals reporting that school has a "special program emphasis" or is an "alternative" school (excluding special education and vocational schools)	44
	Classroom innovations linked to quality of student-teacher social relations: additive index of six possible innovations.	2.8 (1.6)
Autonomy	Principal's reported influence within seven domains (alpha=.83)	4.5 (0.5)
	Reported influence of the state on charter operations within seven domains (alpha=.80)	2.7 (0.8)
	Teacher's reported influence within seven domains (alpha=.86)	3.0 (0.8)
	Percentage of enrolled students who are home schooled	3.6
Coherent community	Teacher reports of cohesive beliefs and principal's support within five domains (alpha=.85)	3.1 (0.6)
	Student homogeneity index: number of nonwhite groups with at least 10 percent of the enrollment	0.9 (0.7)
Parent participation	Specific opportunities for parent participation, Including open house, written contracts with parents, volunteer opportunities, parents involved in budget planning and governance (8-point additive index)	6.4 (2.1)
	Affirmative programs involving parents, including Parent drop-in center, log of parent participation, Specific requirements and involvement of parents in homework activities (8-point additive index)	4.3 (2.0)
IV. Charter school type and context		

School origin	Percentage of schools, start-ups	74
	Percentage of schools, converted from a conventional public school	16
	Percentage of schools, converted from a private school	10
Community type	Percentage of schools central city	53
	Percentage of schools in suburb	32
	Percentage of schools in rural area	15
Private management	Percentage of schools managed by a private company (for-profit or non-profit).	31
State policy regime	Percentage of schools in states requiring that charter teachers be credentialed	56
	Index score (0-3) indicating state's provide fiscal support for start-up funds, facilities, and/or student transportation (median=1.0)	1.5 (0.5)

Note: Original measures detailed in Gruber et al. (2002), National Center for Educational Statistics.

Appendix 2. Which school attributes explain variation in equity measures?

A thorough accounting of the factors that may explain these disparities among charter schools is beyond our scope. But we did construct several preliminary models to disentangle the effects of differing school contexts. Technical readers may obtain these regression analyses from the authors.

Public-conversion charter schools (making-up 16% of sampled charters) look stronger on conventional gauges of equity, compared to start-ups and private-conversion schools. For example, the median teacher salary was significantly higher in public-conversion charters (about $4,600 higher than start-ups on average; the $ coefficient is significant at $p<.005$), compared to the other two types, after taking into account school grade level, urban or suburban setting, and public or private management. This is partially explained by the fact that the mean public-conversion teacher has 9 years of experience, compared to 6 years for the average start-up teacher (Table 4).

The average share of students eligible for lunch subsidies is almost 10% higher in public-conversion charters as a share of total enrollment, compared to start-ups ($p<.001$). And public-conversion schools employ fewer uncredentialed teachers (about 21% fewer than start-ups as a share of the mean school's total teaching staff; $p<.0001$), after taking into account the other covariates.

When we focus on the localized conceptions of fairness, public-conversion and elementary charters report more specific programs to encourage parent participation ($p<.002$ and $p<.0001$, respectively), after taking into account the other features of school context. Private school conversions are more innovative in creating methods for strengthening student-teacher relationships, again compared to start-ups (the base; $p<.06$).

The share of students eligible for lunch subsidies is 18% higher in central-city charters, compared to suburban charters ($p<.0001$). These more urban schools also report about 12% more uncredentialed teachers, compared to suburban and rural schools ($p<.002$). And central-city teachers report less

convergence in staff beliefs and less consistent support from their principal than teachers in suburban charter schools ($p<.02$).

References

Available from the authors and appearing in Bulkley, K., & Wohlstetter, P. (eds., in press). *Cutting loose: The impact of charter schools on educational practices, teachers, and students*. New York: Teachers College Press.

Table A. State by State Breakdown – Charter School Characteristics

	Arizona [n=207]	California [n=133]	Washington DC [n=18]	Florida [n=64]	Michigan [n=135]	Minnesota [n=33]	North Carolina [n=49]	Texas [n=81]	Statistical significance
Schools and Resources									
Elementary schools [%]	42	63	31	76	61	48	72	50	▪▪▪
Start-up schools [%]	78	56	75	90	76	83	79	60	▪▪▪
Privately managed [%][1]	42	16	44	27	58	28	33	42	▪▪▪
Students per full-time teacher	22	30	16	17	20	16	14	17	▪▪▪
Students per part-time teacher	77	230	60	117	127	62	126	120	▪▪▪
Students per classroom computer	8	8	7	6	8	5	6	9	o
Principal's salary [$ mean]	46,706	66,642	60,142	46,796	59,228	35,571	46,616	49,431	▪▪▪
Students									
Ave. enrollment, all schools [median]	131	270	141	130	212	100	154	172	▪▪▪
Ave. enrollment, elementary schools [median]	124	268	100	125	275	130	155	160	▪▪▪
Enrollment, black [%]	8	10	80	42	43	23	50	33	▪▪▪
Enrollment, Latino [%]	25	28	17	8	5	4	1	42	▪▪▪

Table A continues...

	Arizona [n=207]	California [n=133]	Washington DC [n=18]	Florida [n=64]	Michigan [n=135]	Minnesota [n=33]	North Carolina [n=49]	Texas [n=81]	Statistical significance
Students:									
Eligible for lunch subsidy [%]	42	36	67	42	40	52	46	59	▪▪▪
Receiving Title I instructional Support [%]	7	3	6	2	7	1	5	4	▪
IEP developed via special education [%]	10	8	14	22	8	19	17	12	▪▪▪
Teachers									
Experience [years in classroom]	5	8	4	5	5	5	7	7	▪▪▪
Uncredentialed [% at ave.school]	50	32	80	59	56	37	57	56	▪▪▪
Salary [median $]	29,404	38,423	39,562	27,614	31,577	31,454	28,892	30,605	▪▪▪
Teachers' reported influence [four-point scale][2]	3.0	3.3	2.8	2.8	3.0	3.5	3.0	2.8	▪▪▪

▪ $p<.001$, ▪▪▪ $p<.001$, ○ not statistically significant. Source: Weighted sample of 1,010 charter schools. Data collected from charter school principals and teachers by the U.S. Bureau of the Census for the National Center for Educational Statistics, Washington DC. Detailed analysis appears in 'Charter Schools and Inequality,' Policy Analysis for California Education (PACE), University of California and Stanford University, April 2003..

[1] Charter school is managed by a private or public organization, other than a school district or state agency, that operates more than one charter school.

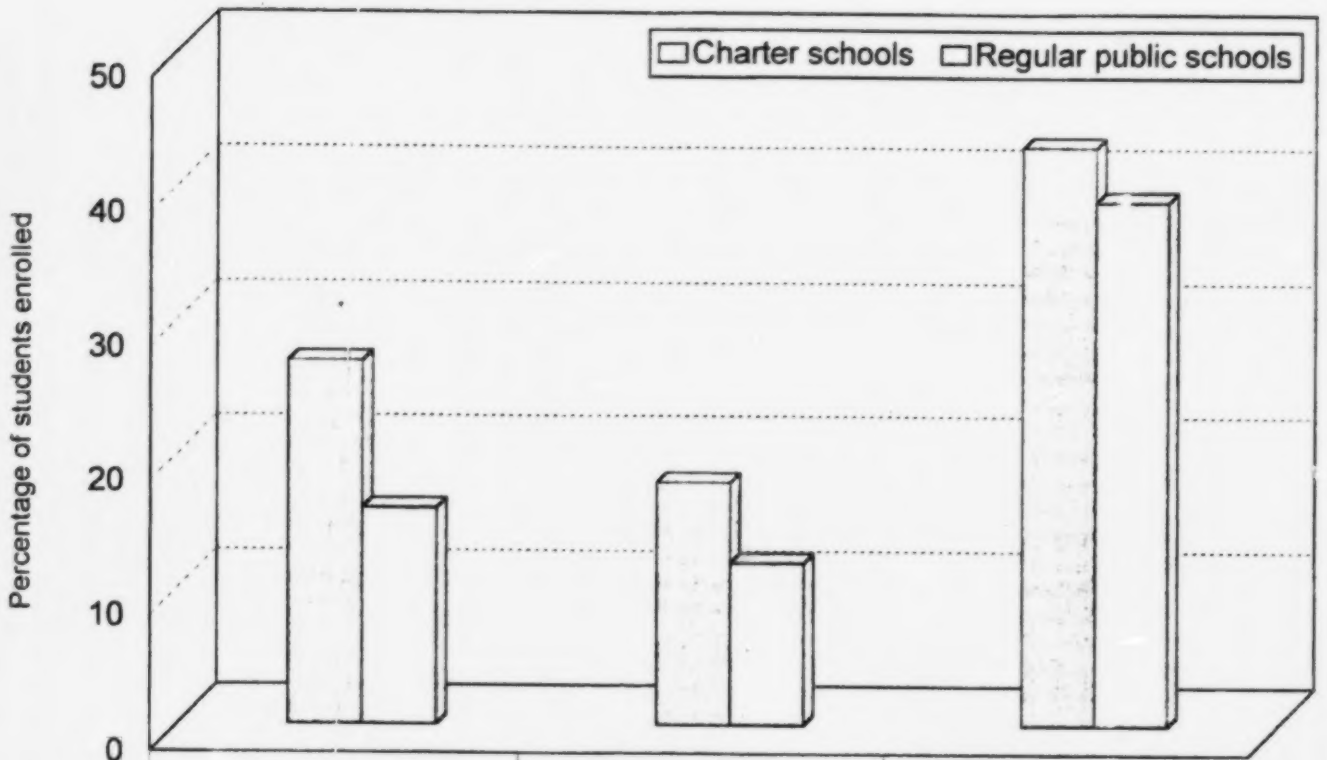
[2] Teacher's reported influence over curricular issues, school-wide planning, student assessment, and other areas. See appendix 1 of the technical report, 'Charter Schools and Inequality,' PACE, University of California and Stanford University..

Table 4. Conventional equity indicators – variation in teacher qualities among charter schools
(*n*=1,010 weighted schools; weighted means and significant differences reported)

	Teacher Composition: African American (%)	Latino (%)	Emergency, probationary, or provisional credential (%)	Tenure (years teaching)
Charter school type			PPP	PPP
Start-up	12.7	7.4	51	6
Conversion-public	8.0	7.7	28	9
Conversion-private	13.6	7.6	60	6
Community type	PPP	P	PPP	
Central city	18.4	9.1	56	6
Suburban	6.7	5.8	39	6
Rural	1.3	5.6	42	7
Public/private management		PPP	PPP	PPP
Schools under district or state	11.4	6.0	45	7
Schools managed by private firm	13.2	11.1	55	5

Significance of mean differences, based on ANOVA or chi-square, appears above the variable: P $p<05$, PP $p<.01$, PPP $p<.001$.
Standard deviations and *f*-values available.

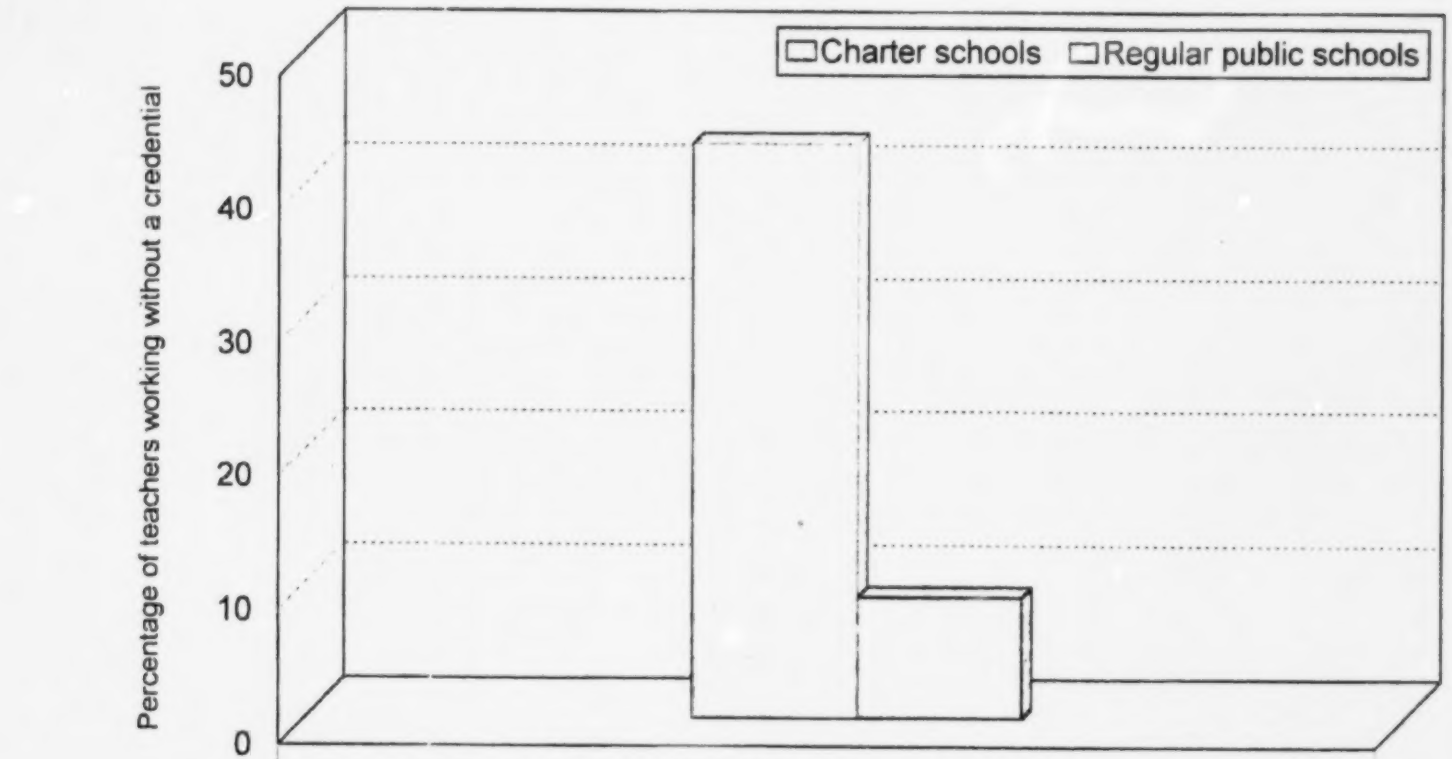
Figure 1. Charter schools serve a higher share of black and Latino students than regular public schools



	% students, black	% students, Latino	% students, lunch-subsidy eligible
Charter schools	27	18	43
Regular public schools	16	12	39

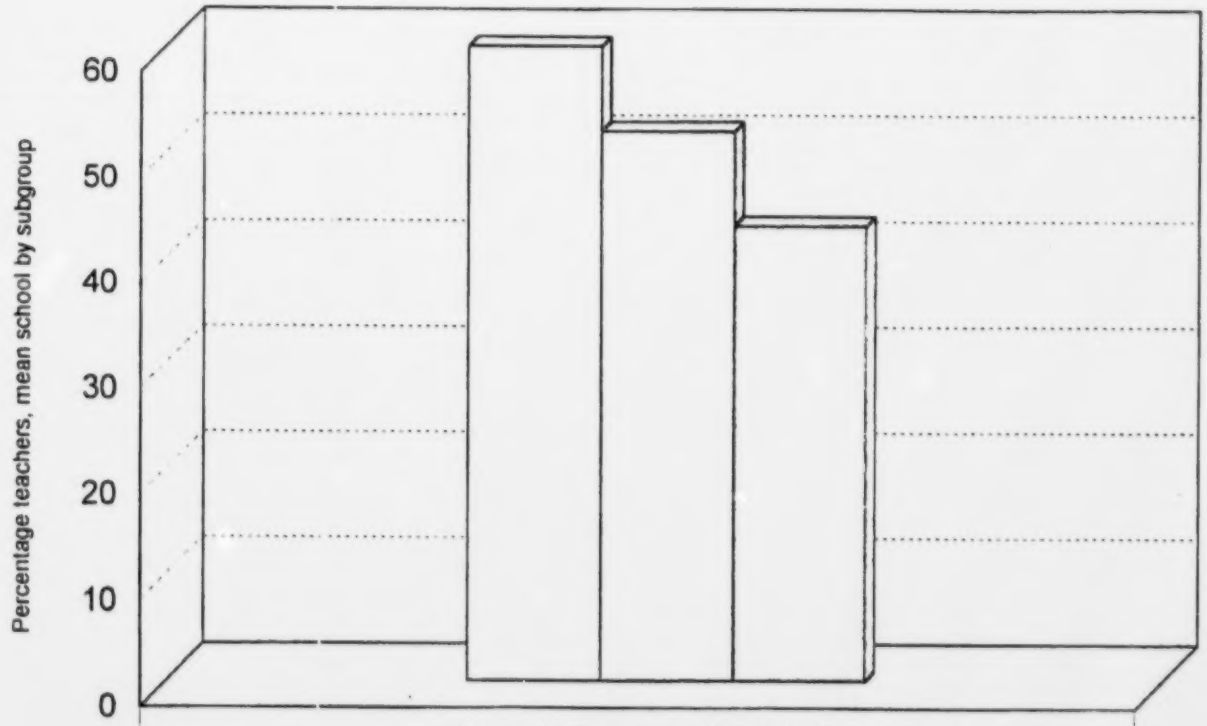
Data from NCES weighted sample of 1,010 charter schools and 83,725 regular public schools in 1999-2000. From 'Charter Schools and Inequality,' Policy Analysis for California Education (PACE), April 2003.

Figure 3. Charter schools rely heavily on uncredentialed teachers compared to regular public schools



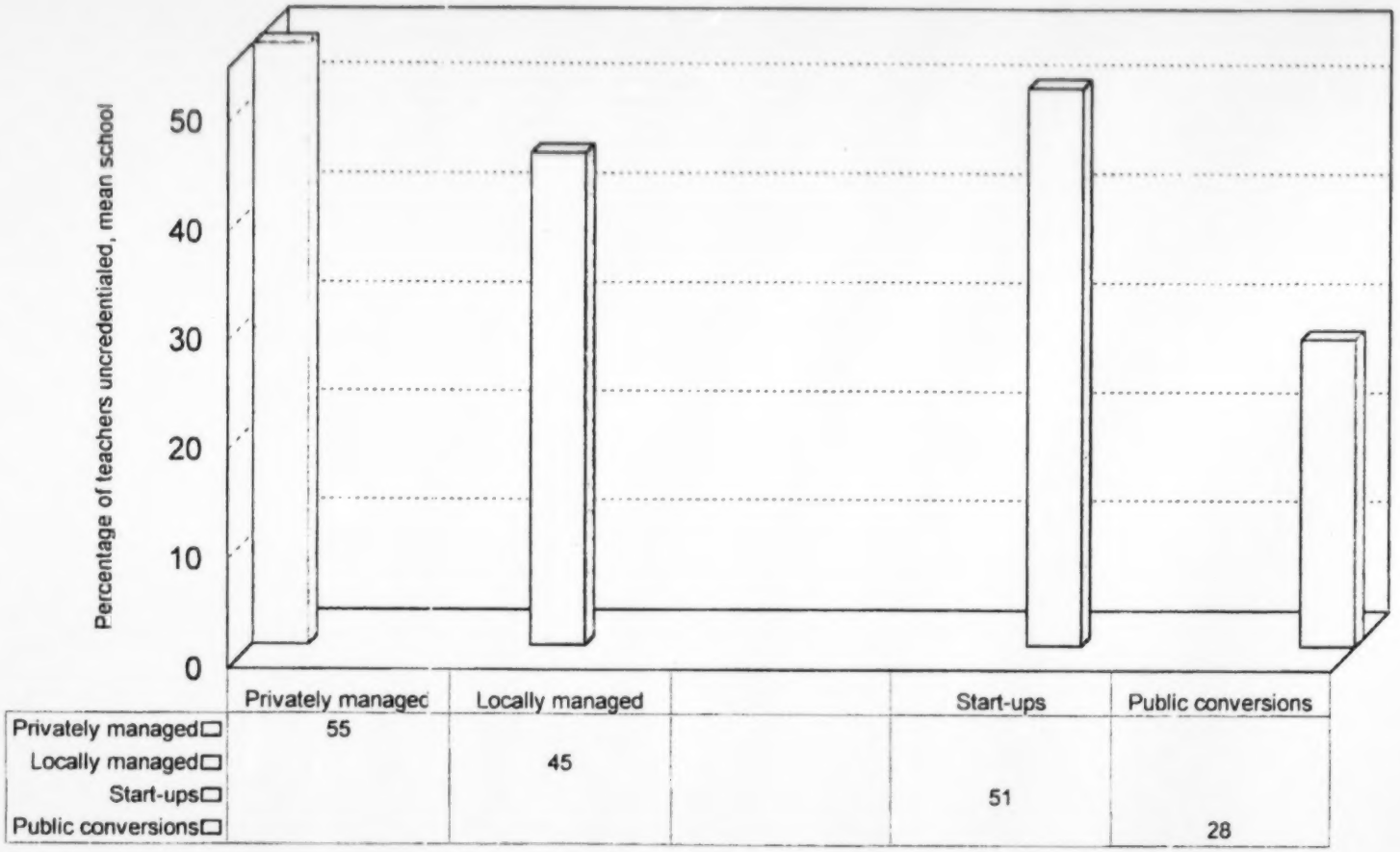
Uncredentialed teachers include those with emergency, provisional, or temporary teaching certificates, as defined by states. The average number of uncredentialed teachers in the mean charter school equals 48 percent. The 43% figure displayed, comparable to the 9% figure for regular public schools, is calculated by pooling all charter teachers. Data from weighted sample of 1,010 charter schools and 83,725 regular public schools in 1999-2000. From 'Charter Schools and Inequality,' Policy Analysis for California Education (PACE), April 2003.

Figure J. Charter schools enrolling mainly black or Latino students rely more heavily on uncredentialed teachers than predominately white charters



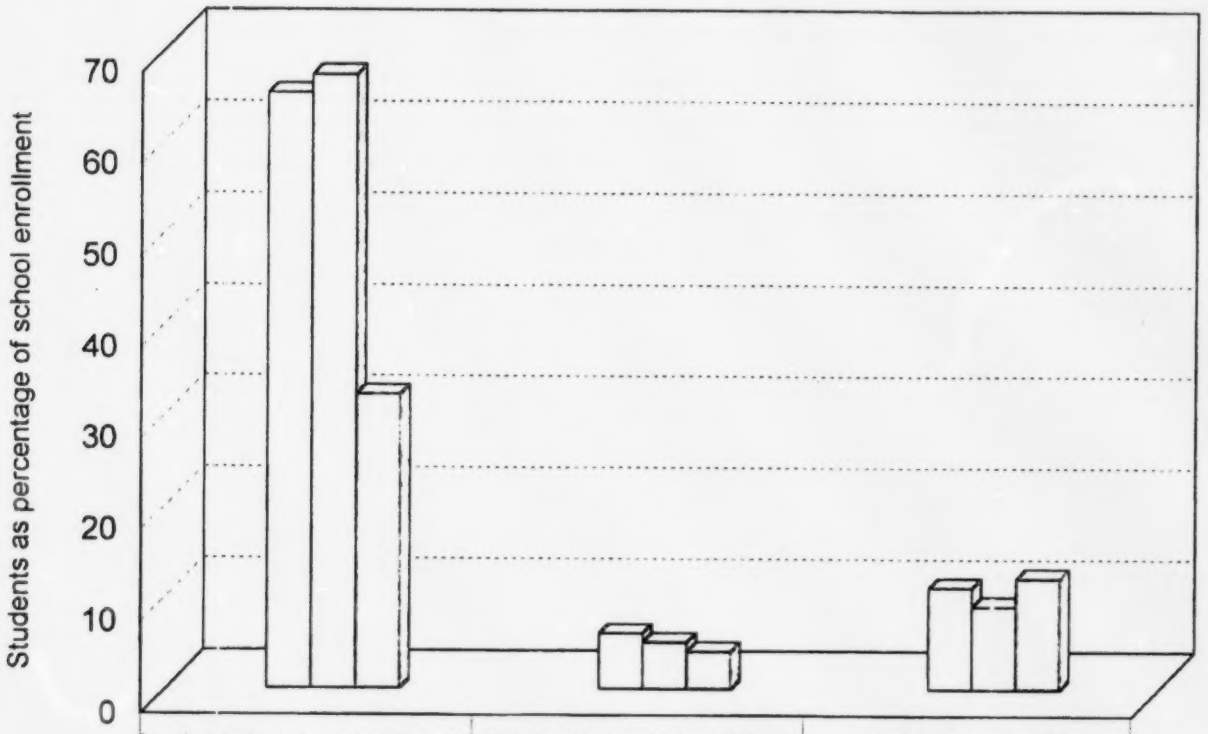
Data from NCES weighted sample of 1,010 charter schools. From 'Charter Schools and Inequality,' Policy Analysis for California Education (PACE), April 2003.

Figure D. Privately managed and start-up charters rely more heavily on uncredentialed teachers



Data from NCES weighted sample of 1,010 charter schools in 1999-2000. From 'Charter Schools and Inequality,' Policy Analysis for California Education (PACE), April 2003. 'Uncredentialed' includes teachers with an emergency, provisional, or probationary certificate.

Figure K. Charter schools draw few categorical aid dollars for low achieving students, regardless of ethnic composition



	Students lunch-subsidy elig.	Students receiving Title I	Students with IEP
Predominately black charters	65	6	11
Predominately Latino charters	67	5	9
Predominately white charters	32	4	12

Data from NCES weighted sample of 1,010 charter schools. From 'Charter Schools and Inequality,' Policy Analysis for California Education (PACE), April 2003.

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